

IN THE SPECIFICATION:

Page 1, immediately following the title, please insert the following:

This is the U.S. national phase of International Application No. PCT/DE03/02640 filed August 6, 2003, the entire disclosure of which is incorporated herein by reference.

Description BACKGROUND OF THE INVENTION

Field of the Disclosure

The paragraph beginning on page 3, line 4 has been changed as follows:

The ~~present invention~~ disclosure concerns a fan impeller with a base plate and a number of fan impeller blades fastened to the base plate, the fan impeller blades being ~~essentially~~ substantially arranged ~~perpendicular~~ perpendicularly to the base plate and forming ~~an essentially~~ a substantially radial arrangement in which each fan impeller blade has a front edge arranged radially ~~outward~~ outwardly and ~~essentially~~ substantially perpendicular to the base plate, a rear edge arranged radially ~~inward~~ inwardly and ~~essentially~~ substantially perpendicular to the base plate, an outer surface arranged on the delivery side of the fan impeller, and an outer surface arranged on the intake side of the fan impeller.

On page 3, after line 10 please insert a heading as follows:

Related Technology

On page 4, after line 16 please add a heading as follows:

GENERAL DESCRIPTION

The paragraphs beginning on page 4, line 18 have been changed as follows:

The ~~task of the present invention~~ disclosure is therefore ~~to modify~~ provides a fan impeller construction so that the drawbacks of the prior art are overcome. In particular, it is to be prevented that solid and/or liquid particles present in air circulated in a cooking appliance directly reach a heating device or heat exchanger surrounding the fan impeller because of the fan impeller without significantly reducing the efficiency of the fan impeller.

The ~~task of the present invention is solved in that~~ disclosure provides an impeller wherein at least one elevation is arranged and/or formed on the outer surface of at least one part of the fan impeller blades, which is spaced from the base plate and extends away from the base plate essentially diagonally from the front edge to the rear edge of the fan impeller blades.

The paragraph beginning on page 4, line 29 has been changed as follows:

The ~~invention~~ disclosure also proposes that the fan impeller blades be curved so that the outer surface curves radially outward between the front edge and the rear edge.

The paragraphs beginning on page 5, line 6 have been changed as follows:

A support element, as in the form of a cover ring, of the fan impeller blades on the side of the fan impeller blades opposite the base plate is also proposed with the invention.

It is preferred ~~according to the invention~~ that at least one elevation be designed arc-like at least in areas, in which it is preferably bent away from the support element.

It is preferred that at least one elevation has at least in areas a spacing to the support element, especially in the region of the rear edge, of at least about 1 to 10 mm, preferably 5 to 15 mm.

The paragraphs beginning on page 6, line 1 have been changed as follows:

It is also preferred that at least one elevation be tightly joined, preferably with silicon, to the outer surface, at least in areas, on the side facing away from the direction of rotation of the fan impeller.

The disclosed fan impeller ~~according to the invention~~ can be arranged in a cooking appliance.

The basis of the ~~present invention~~ disclosed fan impeller is the surprising finding that by elevations on the outer surface of the fan impeller blades on a base plate, a situation in which solid and/or liquid particles contained in the circulated air, especially in the form of grease particles, are diverted radially by the fan impeller is avoided. Instead, solid and/or liquid particles that strike the outer surfaces of the fan impeller blades are stopped on the elevation and diverted in the direction toward the base plate by the special geometry of the elevation. In the region of the base plate the

solid and/or liquid particles can then be released from the fan impeller blades without striking devices that are arranged radially around the fan impeller, for example, a heating device within a cooking appliance.

The paragraph beginning on page 6, line 18 has been changed as follows:

On the other hand, because of the disclosed fan impeller ~~according to the invention~~, a situation is surprisingly achieved in which the efficiency of the fan impeller is not significantly compromised, since no large obstacles are arranged in the radial flow path of the circulated air. In addition, the elevations arranged on the outsides of the fan impeller blades ensure additional stability of the fan impeller blades themselves.

On page 6, after line 22 please add a heading as follows:

BRIEF DESCRIPTION OF THE DRAWING

The paragraphs on page 6, line 23 have been changed as follows:

Additional features and advantages of the invention are apparent from the following description, in which a practical example of the ~~invention~~ disclosed fan impeller is described in detail by means of a drawing consisting of a single figure. The figure shows a perspective view of a fan impeller according to the ~~invention~~ disclosure.

DETAILED DESCRIPTION OF THE DRAWING

The figure shows a perspective view of a fan impeller 1 ~~according to the invention~~ that can be incorporated in a fan compartment of a partially depicted cooking appliance in order to circulate air rotating in the direction of arrow A in a cooking space that is separated in areas from the fan compartment by an air baffle (not shown). The fan impeller 1 has a base plate 2, on which a number of fan impeller blades 3 are arranged, which face the cooking space of the cooking appliance. The fan impeller blades 3 are curved and arranged essentially perpendicular to the base plate 2 in order to form an essentially radial arrangement on the base plate 2. Each fan impeller blade 3 during operation has a rear edge 5 that comes in contact first with the circulating air and an outer surface 6 arranged on the delivery side of the fan impeller 1 during operation. An elevation 7 is also provided on the outer surface 6 of a fan impeller blade 3, which extends away from the base plate 2 essentially

diagonally from one front edge 4 to the rear edge 5 of the fan impeller blade 3. The elevation 7 is then arranged with a spacing from 10 to 20 mm from the base plate 2 on the outer surface 6. The elevation 7 can extend completely over the entire width of fan impeller blade 3 or have a spacing to the side of the fan impeller blade 3 opposite the base plate 2, in which the spacing is preferably 5 to 15 mm. On the side of fan impeller blade 1 opposite the base plate 2 a cover ring 8 is provided, which ensures additional stabilization of the fan impeller blades 3 within the fan impeller 1. The elevation 7 should rise from the outer surface 6 of the fan impeller blade 3 by 2 to 5 mm and end with a sharp edge on the rear edge 5 of the fan impeller blade 3 on the end facing the air flow in order to form a discharge groove for solid and/or liquid particles, which prevents further flow of the solid and/or liquid particles beyond the elevation 7 and guides them in the direction of the base plate 2. In addition, sealing can be provided on the side lying in the flow shadow between the outer surface 6 and the elevation 7.

The paragraphs beginning on page 7, line 19 have been changed as follows:

The method of operation of the impeller blade 1 ~~according to the invention~~ is described below.

The impeller blade 1 is rotated in the fan compartment in the direction of arrow A via a motor not shown in the figure, and therefore draws in air from the cooking space through a center opening in the air baffle and guides it radially ~~outward~~ outwardly so that it goes back to the cooking space from the fan compartment via the air baffles. Solid and/or liquid particles, especially grease particles of different size, that reach the region of the fan impeller 1, strike the outer surfaces 6 of the fan impeller blades 3 on the delivery side of the fan impeller and are diverted along the elevation 7 in the direction toward the base plate 2. If the solid and/or liquid particles reach the end region of the elevation 7 on the front edge 4 of the fan impeller blades 3 (and finally the base plate 2), the solid and/or liquid particles released at that point cannot be released directly to the device radially surrounding the fan impeller 1, for example, in the form of a heating device (not shown) or a heat exchanger (not shown). Because of this “leading” of the solid and/or liquid particles past a heating device and/or a heat exchanger, their burning is prevented, which can lead to an odor burden and a negative effect on the cooking result. Instead, the separated solid and/or liquid particles can be disposed of.

The fan impeller ~~according to the invention~~ of the disclosure in a cooking appliance therefore prevents solid and/or liquid particles from being deposited directly on a heating device enclosing the fan impeller and also ensures that air circulated by the fan impeller 1 can be diverted completely radially, since the efficiency of the fan impeller 1 is only slightly reduced by the elevation 7. The fan impeller 1 acquires higher stability because of the elevations 7.